

jumped from the frying-pan into the fire, to use Dr. Ure's figure.

As I was going to the *Mechanics' Magazine* Office, for Mr. Griffin's letter, I thought I would turn over the index, and see whether the editor of that journal had passed any opinion upon Mr. B.'s merits, as I expected; I found in No. 989, July 23, 1842, the opinion sought; the said number contains a description of a plan for the restoration of the city of Hamburg, by Mr. Bernhardt. After the plan, the author says, "that the public are so often deceived by men of science; as well as by empirics in philosophy;" he then lays in the poor testimonials on "my science." The editor did not give these in full; but gives the names of M.M. Shuckmann, Maltzahn, Schonburg, Baron Bulow, &c. &c. Then follow the opinions of C. Barry, Esq., James Hansom, Esq., Dr. N. Grant, and Dr. A. Toulman (all favourable). The editor justly remarks, "these are strong testimonials; but," adds he with his usual sagacity, "our readers cannot be expected to have forgotten that it contained some three or four years ago, others of a different description; we must refer in particular to an elaborate paper, by Dr. Ure, in vol. 28, p. 273, to which we have never seen any satisfactory answer." "Mr. Bernhardt must enable the public, by a full and unreserved disclosure of particulars, to form their own judgment upon it, or make up his mind for the general neglect which will be the inevitable, and then not unmerited consequence.—Ed. *Mechanics' Mag.*"

I showed in my last, that there can be no necessity for secrecy if Mr. B. has, as he asserts, a patent for the "Gem," and I quote high authority in support of the opinion on the point of Patent Law. Mr. B. refers to—Baron Alderson—"If you have invented a principle and a mode of carrying that principle into effect, then you are entitled to protect yourself from all other modes of carrying the same principle into effect, that being treated by a jury as piracy." (See *Jupe v. Pratt*, Pat. Rep. 146). On this subject Mr. B. does appear to me to be inconsistent in his statements; he says at one time, 1st. "I won't publish, because no one can understand and apply my system;" and then, 2ndly. "I won't publish, because, if I do, there would be an end of discussion." 3rd. "My science shrinks not from scrutiny, for" (for why, think you?) "the laws of nature are invincible!" Although I must concede the truth of the last proposition, I confess I cannot perceive the sequence. Then, with regard to proposition 2; does he mean that he won't publish because he likes to keep up discussion for the sake of itself, or (which seems most likely), that he won't publish because, if he did, its simplicity would render discussion unnecessary; which horn of this dilemma will Mr. B. choose? if the latter, then the 1st and 2nd propositions destroy each other.

Respecting the change of air in the House of Commons, I confess I am puzzled to get at Mr. B.'s exact meaning (No. 23, p. 284); the total internal contents of these five rooms and passage I understand to be about "55,000 feet," and the amount of air passed through that space 14,400,000 cubic feet. Now, the rooms were to be maintained at 65 deg., and yet the apparatus is stated to be calculated to warm only "eight or nine millions of cubic feet of air in 24 hours;" this postscript should be carefully read and compared with the former statement (No. 20, p. 246), and it will be seen that it is impossible to get at Mr. B.'s real meaning. If Mr. B. will permit me so "incompetent" as me to put the matter in a tangible shape, I will propose a few questions with that view.

1. What was the total area warmed?
2. How often was the air totally changed?
3. What was the external temperature of air in degrees?
4. What the constant temperature in the whole space warmed?
5. The amount of loss of heat from windows?
6. The kind and amount of fuel consumed?

All having reference to a period of twenty-four hours. If Mr. B. will furnish some data of this kind, well authenticated, some way might be made in the subject; but while he only furnishes testimonials, it would be a waste of time to occupy your space and the time of "the readers of this valuable journal" upon the subject.

With respect to the 4001, of course I shall not withhold any names, but I wish first to see the gentleman who gave me the information, after which one mention will suffice.

I remain, Sir, yours very respectfully,

GEORGE SPENCER, Engineers' Draftsman.
5, Hungerford-street, Strand,
July 17th, 1843.

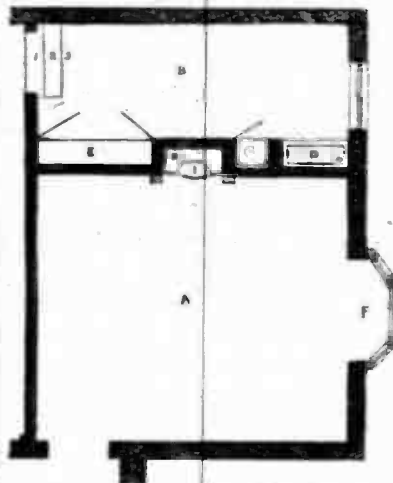
P.S. I forgot to say that Mr. Griffin's letter has not at all changed my opinion of the merits of the "gem;" he says simply that he looks upon the mode of warming and ventilation, invented by Mr. F. A. Bernhardt, architect from Sarony (now resident in this country), as one of the most valuable discoveries in modern times; then he says the French are a

spirited people; that silk might be produced in England; that in Italy the silk-worms feed on white mulberries, but that they thrive quite as well on the red ones; that consumptive patients might be accommodated here by Mr. B.'s plan; "that Mr. B.'s system is simple, his theory perfect; though I wonder how he came to the bottom of the mystery that "our philosophers never could understand." Altogether this letter is a fit companion for the testimonials, &c., dealing only in vague generalities and assertion, without either argument or point. G. S.

COTTAGE ECONOMY.

We shall have a good deal to say under this head, and we trust to say it effectually. If we recollect rightly, this was the title of a work of Mr. Cobbett's, and we are sure whatever we might say, or have to say, nothing could excel in importance that which is within our province as to the construction, character, and fittings of the building itself. The word cottage is not confined to merely rural dwellings, at least we choose not to confine it so, and we prefer it to the inexpressive terms tenement or dwelling-house. By cottage, then, we would be understood as referring to that class of dwellings occupied by people keeping no servant, or, at most, a little "helper," and we shall accordingly proceed to treat on that most important point in its economy—the FIRE-PLACE.

There are many cottages of the class we speak of that boast of but one fire-place, or, at any rate, of one fire-place for use. The living-room of many families is a species of half-kitchen half-parlour, where cooking and eating are carried on as it were together, and where the slops, dirt, and effluvia of the former sadly interfere with that system of neatness and order which the good housewife would have prevail in her dwelling. To have the first and to constitute one room a sort of parlour, while the preparation of food, the cooking, washing up and so on is carried on in another apartment, is beyond the means of many. It involves a variety of expenses and an increase of labour—extra coals—an extra grate—an extra fire-making, and keeping up dust and dirt—and extra cleaning, to say nothing of increased rent in such houses. Now, it has been our desire to contrive a plan not only for obviating all these evils, but for securing by the way several advantages and comforts.



Herewith is submitted a plan, drawn to the scale of 1/4th of an inch to a foot, wherein A is the dwelling-room or parlour, B a small kitchen or scullery; the relation of the door, fire-place, and window in the parlour is upon a principle generally approved—that is, with the light thrown obliquely on the fire-place, and the door so situated as to break in as little as possible on the fire-side circle, the centre of the room, or the easy disposition of the furniture.

It is from the single fire of this apartment that we propose to accomplish the objects of sufficiently warming it in the old-fashioned way of an Englishman's preference, and of cooking victuals, supplying hot-water to the scullery, and in part warming it, without the objections that we set out with enumerating. It is the grate to contain the fire—H a boiler

surrounding it, with a tap for drawing off the water at the back in the scullery, and a small supply cistern placed out of the way in the cupboard—E C is an oven made of sheet or plate-iron, with a flue circulating round it from the lower corner of the fire at I, and returning again into the chimney due of the parlour fire-place; the door of the oven opens into the scullery B, and so that the light from the window is thrown properly upon the oven. A small ventilating register should be inserted in the lower part of the oven-door, and a steam or vapour pipe in the top of the oven to admit of a stream of air passing through the oven to ventilate it, by which means meat may be baked so as to resemble roasted meat, and avoid the taint or odour and taste of burnt gray which meat baked in closed ovens generally acquires. The damper or slide door of the oven flue, and the scraper for cleaning it, would both be washed from the scullery side.

D is a sink, which should have a fall-down cover so as to serve for a table, and to give greater neatness to the apartment when not in use; upon this table the preparation for cooking could be carried on, and in taking things in and out of the oven, and being directly adjoining will be found very convenient.

The cupboard F, if thought too large, or if desired, might have a portion divided off, and by a small panelled or concealed door, be accessible from the parlour, besides which many articles from the scullery might be passed through by a double slide-door or turn-box, so as to save passing from one apartment to the other.

It will be observed that at the scullery door are three steps; these descend into it and render more convenient the position of the oven, as well as the tap from the boiler. The former would be just so high as to admit of being looked into without bending or stooping, and the latter to admit of a pail being placed conveniently under it.

The scullery itself would be sufficient as a lean-to or sledge-roof; and we may remark again, that it would derive considerable warmth through the agency of the oven and boiler; besides which it would require very little contrivance to have a warm air box or flues to increase the heat and assist the ventilation.

It will now be obvious that this arrangement would be productive of great comfort in many respects, to say nothing of the tidiness and economy of the small kitchen or scullery. The parlour fire-side is, as one may say, sacred from interruption; needle-work, reading, and the like, may be pursued undisturbed by those sitting round it; and the table for meals may be spread with as much of neatness as in the dining-room of the more pretentious mansion. A boarded floor and carpet with the suitable furniture of a cottage-parlour, are all compatible with this arrangement; while a table at most, and a chair or two, but no fender or fire-irons, will be necessary for the kitchen.

While we are in this place, it may be permitted to say one word as to the comfort and pleasantness of a bow-window. This is contrived to be placed in an opening of four feet nine inches wide in the brickwork, with a view to meeting the absurd and vexatious regulations of the window duty Act; but a bow-window of very simple character may be introduced in most cottages, with light ledged shutters folding against the wall, either interior or exterior, and covered with tiles or slates, they add a charm to the cottage, whether we consider the internal comfort or external appearance.

It will be observed that the partition wall between the parlour and the scullery is only a half-brick wall. This is in deference to a strong notion of economy; and since it can be introduced on this plan without impairing the soundness of the structure, there can be no objections taken to it on that score. The cross projections forming the fire-place recess, and that to enclose the oven, serve as abutments or stiffeners, and complete the foundation for the chimney-stack which rises therefrom.

NEW WORKHOUSES AT LIVERPOOL.—The select vestry of the parish of Liverpool, on Tuesday last, adopted the designs for this extensive erection submitted by Messrs. Lockwood and Allen, architects. Its principal front will be 400 feet in length, its style Elizabethan, and the cost 30,000*l*.